

## ABSTRACT

The present invention includes methods of producing an integrated transgene in an avian cell which include introducing a nucleic acid into an avian cell by electroporating and methods of producing a transgenic avian comprising  
5 injecting the cell comprising the transgene into an avian stage X embryo. The present invention also provides for methods of screening for nucleic acid integration in a cellular genome which include transforming a nucleic acid comprising a marker into a recipient avian cell and determining if the nucleic is present in equal copy number in cells of a colony produced by the recipient avian  
10 cell.

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